# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377


Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-03/585g/CEMENT/2017-18 Date: 07.03.2018

## TEST REPORT ON CEMENT

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP Bangalore. |
| * Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of Work | : | Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore. |
| * Reference | : | BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018 |
| * Sample ID | : | Cement |
| Sample Received on | : | 05.03.2018 |
| Period of Testing | : | 05.03.2018 to 07.03.2018 |

The results of the tests conducted on the cement sample are as follows:

| Sl. No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) 1988 (RA-2014) | 26.50 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) 1988 (RA-2014) | 185 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) 1988 (RA-2014) | 470 Minutes | Not More than 600 Minutes |
| 3 | Soundness by Le Chartlier Method | IS-4031 (Part-3) 1988 (RA-2014) | 1 mm | Not more than 10mm |

*Information is furnished by the Customer/Representative.

AC-13

**Note:**

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

*********

VIDYARANI P.K.
Technical Manager


#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com


Scanned by CamScanner

# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-03/585g/SAND-Gradation/2017-18 07.03.2018

## TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP Bangalore. |
| * Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of Work | : | Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore. |
| * Reference | : | BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018 |
| * Sample ID | : | Fine Aggregates |
| Technical Reference | : | IS : 2386 (Part 1) - 1963 (RA-2011) |
| Sample Received On | : | 05.03.2018 |
| Date of Testing | : | 07.03.2018 |

Total Wt. of Aggregates in gms = **1000**

| IS Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2011) | | | |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone-III | Zone-IV |
| 10 | 100 | 100 | 100 | 100 | 100 |
| 4.75 | 95.00 | 90-100 | 90-100 | 90-100 | 95-100 |
| 2.36 | 73.50 | 60-95 | 75-100 | 85-100 | 95-100 |
| 1.18 | 40.90 | 30-70 | 55-90 | 75-100 | 90-100 |
| 600 Micron | 19.40 | 15-34 | 35-59 | 60-79 | 80-100 |
| 300 Micron | 14.40 | 5-20 | 8-30 | 12-40 | 15-50 |
| 150 Micron | 7.50 | 0-10 | 0-10 | 0-10 | 0-15 |

* Information is furnished by the Customer/Representative

Civil-Tech Consultants & Engineers Bangalore

**Remarks :** This sample is under Zone-I specific limits.

**Note:**

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

**********

**VIDYARANI P.K.**
Technical Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

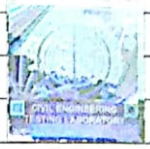
**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-03/585g/Kerb Stone/2017-18 19.03.2018

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CORE

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP Bangalore. |
| * Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of work | : | Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore. |
| * Reference | : | BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018 |
| * Sample ID | : | Precast Slab (100mm Thick) |
| * Grade of Concrete | : | $M_{20}$ |
| Techinical Reference | : | IS:516-1959 (RA- 2013), SP-24:1983. |
| Sample Received on | : | 16.03.2018 |
| Date of Testing | : | 19.03.2018 |



| Sl. No | Dia of Core D (mm) | Height of Core H (mm) | Core Wt (Kg) | Density of Core (kg / $m^3$) | H / D | Correction factor (Based on H/D) | Failure Load (kN) | Core Strength ($N/mm^2$) | Correction Factor for the Dia. (Strength of the Core x 1.08) | Corrected Cylinder Compressive Strength ($N/mm^2$) | Equivalent Cube Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 50.00 | 95.00 | 0.415 | 2224.82 | 1.90 | 0.989 | 30.21 | 15.39 | 16.62 | 16.80 | 21.00 |
| 2 | 50.00 | 90.00 | 0.425 | 2405.01 | 1.80 | 0.978 | 32.05 | 16.32 | 17.63 | 17.25 | 21.56 |
| 3 | 50.00 | 90.00 | 0.460 | 2603.07 | 1.80 | 0.978 | 33.62 | 17.12 | 18.49 | 18.09 | 22.62 |

* Information is furnished by the Customer/Representative

**Note:**

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

AE-13

ರವಾಯಕ್ಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಬಿ. ರಸ್ತೆ. ರವೀಂದ್ರನಗರ. ಬೆಂಗಳೂರು

*********

VIDYARANI P.K.
Technical Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377


Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-03/585g/QB(BM)/2018-19 04.04.2018

## TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP Bangalore. |
| * Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of work | : | Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore. |
| * Reference | : | BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018 |
| * Sample ID | : | Bitumen |
| Source/ Location | : | Hot Mix Plant, Bangalore. |
| Sample Received on | : | 02.04.2018 |
| Period of Testing | : | 04.04.2018 |

The results of the tests conducted on the bitumen sample are as follows:

| Sl. No | Description | Test Method as per IS | Test Result | Requirement as per IS:73:2013 |
|---|---|---|---|---|
| 1 | Penetration at 25 $^0$C, 1/10 mm | IS :1203 -1978 (RA-2014) | 67 | 60 to 70 |
| 2 | Softening point, $^0$C | IS :1205 -1978 (RA-2014) | 47 | Min. 45 |
| 3 | Ductility at 27$^0$C, cm | IS :1208 -1978 (RA-2014) | 100 > | Min. 50 |
| 4 | Flash Point, $^0$C | IS :1209 -1978 (RA-2014) | 315 | Min. 220 |

* Information is furnished by the Customer/Representative

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

**********

VIDYARANI P.K.
Technical Manager


#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com


Scanned by CamScanner

# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No: CTCE/BBMP/KRIDL/W.No.13/BM/AIV/2018-19 04.04.2018

## TEST REPORT ON IMPACT VALUE OF AGGREGATES

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP Bangalore. |
| * Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of Work | : | Improvements of Asphalting at BHEL Mini Colony surrounding area in Mallasandra Ward No.13, Shettyhalli, Sub Division, BBMP, Bangalore. |
| * Reference | : | BBMP/EE/DD/WO/222/2017-18 Dated:07.02.2018 |
| * Sample ID | : | Hot Mix Plant, Bangalore |
| Technical Reference | : | IS : 2386( Part -4)-1963 (RA-2011) |
| * Type of Mix | : | Bituminous Macadam |
| Date of Testing | : | 04.04.2018 |

| Sl No. | Details | Trial No. 1 | Trial No. 2 | Average |
|---|---|---|---|---|
| 1 | Total weight of aggregate sample filling the cylindrical measure = $W_1$ g | 380 | 384 | |
| 2 | Weight of agregate passing 2.36 mm sieve after the test = $W_2$ g | 82 | 88 | |
| 3 | Weight of aggregate retained 2.36 mm sieve after the test = $W_3$ g | 298 | 296 | |
| 4 | Aggregate Impact value = percent fines 100* (W2/W1)% | 21.58 | 22.92 | 22.25 |

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

Comments:

⇒Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

**Note:**

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

*********

**Civil-tech Consultants & Engineers**
#23/14, 7th Cross, 3rd Stage 4th Block,
Shakthi Ganapathinagar,
Basaveshwaranagar, Bangalore-560 079.


#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com


Scanned by CamScanner